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Case report

Whose surgery is this? Endometriosis of the round ligament

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Abstract. We report two cases of endometriosis of the round ligament in a 37 and 26 - years old women, with a lump in their right groin and catamenial pain referred to plastic surgery department. MRI showed in both cases nodular lesion in the right inguinal region. The patological examination of the surgical specimen revealed endometriosis of the round ligament. The presence of a groin mass with pain increasing during the menstrual period must raise the suspicion of inguinal endometriosis and a gynecological evaluation is essential to provide a correct management of this rare condition. (www.actabiomedica.it)

Key words: Endometriosis, Round Ligament, Inguinal lump

Introduction

Endometriosis is a common gynecological pathology that occurs in about 8-15% of women in their fertile age (1-2). The main characteristic of the disease is the development of endometrium-like tissue outside the uterine cavity, resulting in pain during or outside the menstrual cycle.

The ovaries and pelvic peritoneum are the most common sites of occurrence. Rare extra-pelvic endometriosis includes the gastrointestinal tract, urinary tract and thoracic cavity (3) whereas the inguinal area is an exceptional location of disease, accounting for about 0.3-0.6% of all patients affected by endometriosis (4).

We report two cases of extra-pelvic round ligament occurrence, primarily referred to the plastic surgeon.

Case Reports

Case 1

A 37-year-old nulliparous woman was referred to the Department of Plastic Surgery with a two-year history of a lump in her right groin with increasing pain during the menstrual period. Her past medical history was uneventful and she had no previous surgery. During physical examination, a 15 mm painful lump with tense consistency was palpated close to the pubic arch. The left groin was normal.

MRI detected an oval lesion of approximately 21x17 mm, partly cystic, in most of its superficial portion, and partly finely corpuscular with small hemorrhagic foci.

During surgical lesion resection, performed by a gynecologist surgeon, a thick overlapping of the

inguinal ligament was detected close to the pubic tubercle. More in depth, the subcutis appeared to be organized in denser fibrotic manner at the area close to the inguinal ligament where a small nodule was also seen. After its incision, a chocolate-colored material leaked out. Postoperative course was uneventful and pathology examination revealed endometriosis (CD10+).

Gynecologic evaluation and transvaginal ultrasound showed normal uterus and ovaries and no sign suggestive of pelvic endometriosis. No adjuvant treatment was suggested.

Case 2

A 26-year-old nulliparous woman was referred to the Department of Plastic Surgery for a solid lesion in right groin. She had no previous surgery and physical examination revealed a 2,5 cm painful mass over the right groin, fixed on the underlying planes and mobile on the overlying ones. Preoperative MRI showed a nodular formation of 25mm in diameter characterized by the presence of small internal hemorrhagic foci (Figure 1) suggestive of endometriosis in the deep subcutaneous tissue of the right paramedian pubic site, close to the insertion of the rectus abdominis muscle.

Gynecological evaluation was negative for the presence of endometriosis at other sites and surgical removal of the lesion en bloc with the identification of the round ligament was performed by a gynecologist surgeon (Figure 2). Pathology examination confirmed the presence of endometriosis.

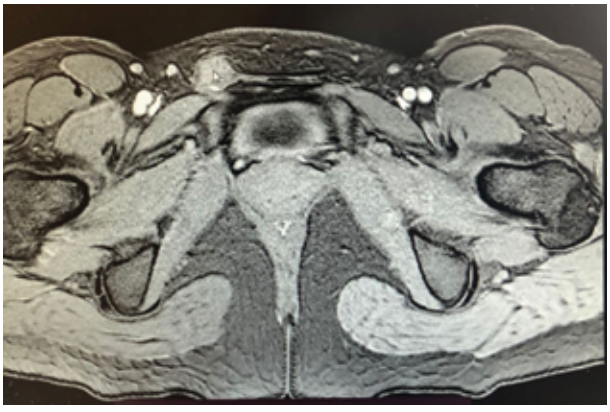

Figure 1. Axial T2-weighted MR image

Discussion

Inguinal endometriosis is an uncommon condition (5) and there are only a few cases reported in the literature (6). The origin of such inguinal endometriosis is unclear. It may derive from the lack of fusion of Nuck's channel, an embryological remnant in females that is normally obliterated within the first year of life, with the spread of endometriotic tissue in the inguinal soft tissue (8-9-10-11). Right side inguinal endometriosis accounts for about 90% of the cases, as the sigmoid colon might probably protect the left inguinal canal (6).

According to Niitsu et al. there are three types of inguinal endometriosis (IEM) based on the site of occurrence:

- IEM-type I: the endometriosis exists at the wall of a hernia sac or of a Nuck's canal hydrocele;
- IEM-type II: the endometriosis arises from the round ligament;
- IME-type III: the endometriosis occurs on a subcutaneous level outside the inguinal canal.

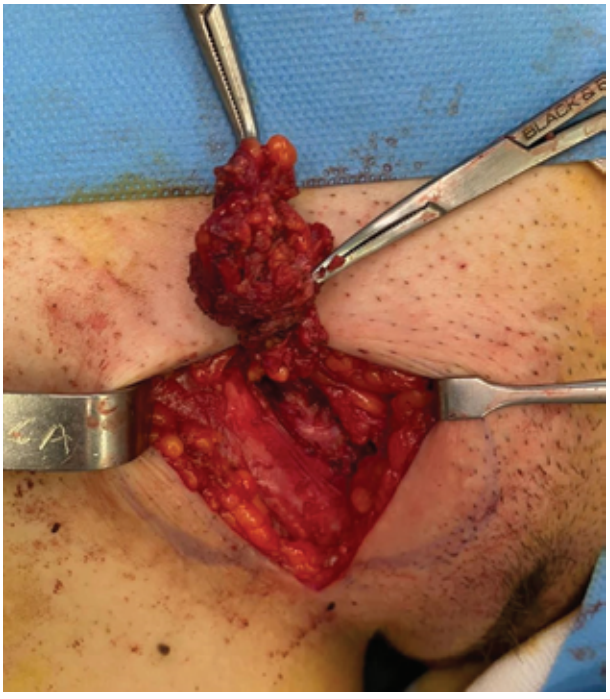

Figure 2. Subfascial mass fixed to the round ligament

The average age of the patient at the time of diagnosis is 37 years (range: 22-67) and usually, the disease shows the onset of a lump with a 2-3 cm diameter in the inguinal area, associated in half of the cases, an increased bulk with more painful symptoms during the menstruation (5-7). The reported cases reflect both the common features of type II IEM.

Preoperative diagnosis and complete en-bloc excision of the lesion is the correct management (3-12).

Differential diagnosis should include lipoma, liposarcoma, epidermoid cysts, angiomyofibroblastoma-like tumors, synovial sarcoma as well as metastases from lymphoma, neuroendocrine carcinoma, breast, lung, urinary bladder, vulva, ovary and colon carcinoma.

Non-neoplastic lesions include hernias, endometriosis, Castelman disease, hematoma, round ligament varices and inflammation (13).

In about one third of patients, a mostly inguinal groin hernia is observed (14) and for this reason, these patients are mainly referred to and treated by general surgeons.

In our two cases the subcutaneous lesion prompted referral to plastic surgeons, considering a possible skin lesion. Only in the second case MRI suggested endometriosis and gynecological consultation was performed preoperatively in order to exclude pelvic endometriosis. Moreover, a postoperative gynecological follow-up might be indicated in case of other sites of disease or in the few cases where administration of medical treatment is indicated (15).

Both of our patients did not receive hormonal therapy after surgical treatment as they did not show other site of disease. Furthermore, we cannot discuss the effective of postoperative hormonal therapy for prevention of recurrence, due to the limited number of patients who underwent surgery (16).

Conclusion

The presence of a groin mass in women of reproductive age, associated with catamenial pain must raise the suspicion of inguinal endometriosis. Gynecological referral or consultation is mandatory in order to allow the best management of this rare condition.

Ethics: Written informed consent was obtained from the patient for publication of this case report and any accompanying images.

Conflicts of interest: Each author declares that he or she has no commercial associations (e.g. consultancies, stock ownership, equity interest, patent/licensing arrangement etc.) that might pose a conflict of interest in connection with the submitted article.

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